II. IMAGE SCANNER & THERMAL PRINT HEAD

CONTENTS

[Removal Procedures & Precautions for Installation]

1. Image Scanner Unit II-1
2. Thermal Print Head II-2

[Adjustment Procedures]

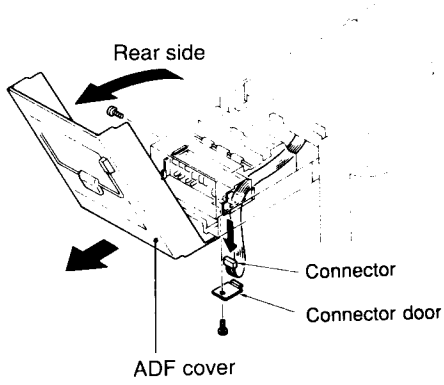
1. Thermal Power of Thermal Print Head III-3

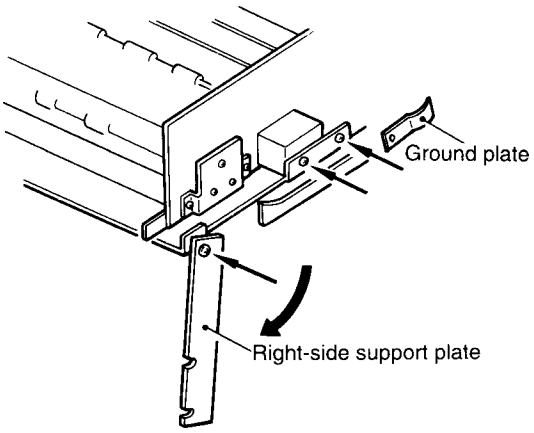
[Removal Procedures & Precautions for Installation]

1. Image Scanner Unit

- Removal Procedures -

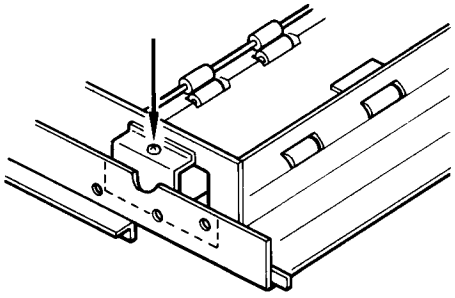
1) Slide the Image scanning section towards the paper feed side and open the ADF cover.
2) Loosen the screw on the Connector door on the bottom of the ADF section and slide the door off.
3) Disconnect the connector coming into the Image scanner unit.
4) Remove the mounting screw of the Ground plate and loosen the other 3 mounting screws on the right-side support plate on the front panel side. Then remove the Ground plate and unhook the plate from the screws to let it hang free.
5) Remove the screw securing the Image scanner unit to the mounting plate on the rear side (opposite to the operation panel).
   [This screw is accessed from above the Image scanner.]
6) Remove the two screws securing the mounting plate of the Image scanner unit on the front panel side.
7) Slide the Image scanner unit slowly towards the front panel side out of the ADF unit, taking care not to catch the wire harness underneath.

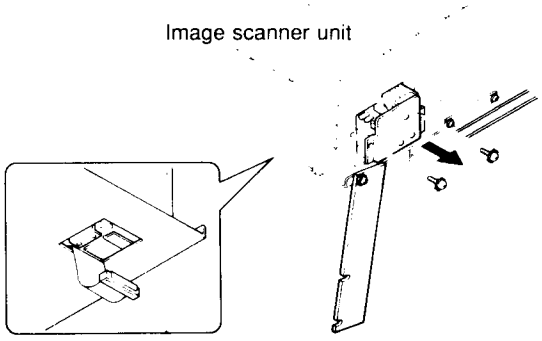




- Precautions for Installation -

- When sliding the Image scanner back in, be sure the Image scanner wire harness is out of the way.





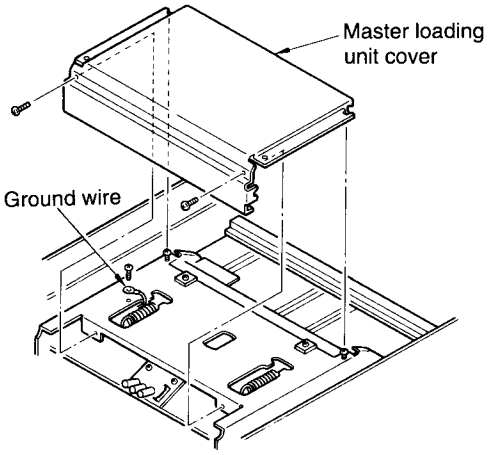
2. Thermal Print Head

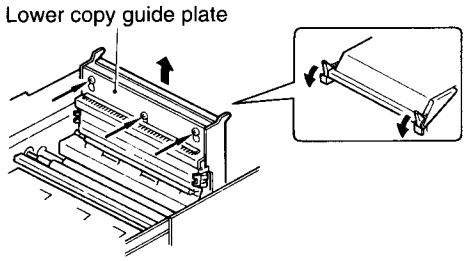
- Removal Procedures -

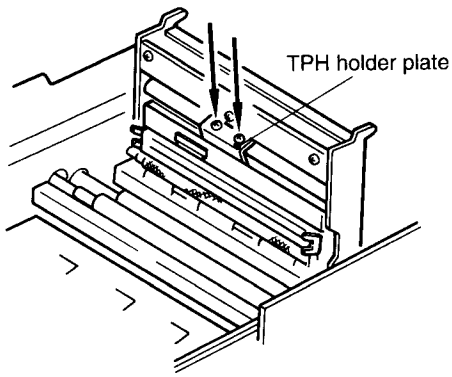
1) Slide the Image scanning section towards the paper feed side.
2) Remove the Master loading unit cover by loosening 2 screws on the top and removing 2 screws on the front side.
3) Remove the screw securing the ground wire from the Thermal print head.
4) Release the Master loading unit from locks by pulling down the release levers.
5) Loosen the 3 mounting screws of the Lower copy guide plate and slide the plate off the Master loading unit.
6) Remove 2 screws on the TPH holder plate, holding the Thermal print head from under not to let it slip down.
7) Disconnect the connectors (2 or 3 pcs.) coming into the Thermal print head.
8) Take out the Thermal print head slowly, taking care not to give it any hits.

* Be careful not to damage the heating area of the Thermal print head.

* Take extra precautions not to allow any static electricity to pass through the connectors on the Thermal pint head when removed.
It will damage the Thermal print head.







[Adjustment Procedures]

1. Thermal Power of Thermal Print Head

- Check & Adjustment -

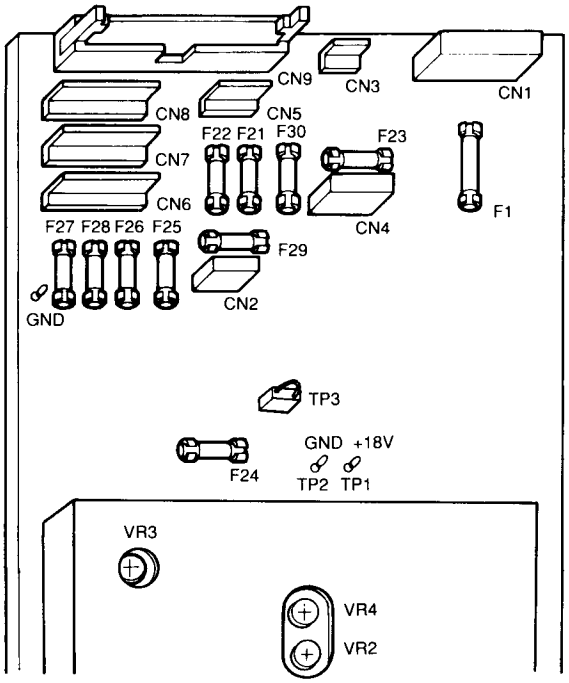
1) Turn off the power if it is on.
2) Remove the Front right cover.
3) Connect the positive terminal of the voltmeter to **TP1 (+18V)** and the negative one to **TP2 (GND)** on the **Power supply PCB**.
4) Remove the jumper connector from **TP3** on the **Power supply PCB**.
5) Turn on the power and check if the voltage value indicated on the voltmeter is **20.0 ± 0.1V** (for 3-connector Thermal print head) or **21.8 ± 0.1V** (for 2-connector one).
6) If not, adjust the voltage to the above-mentioned value with **VR4** (for wide-range adjustment) and **VR2** (for short-range one) on the **Power supply PCB**.
7) Next, to check the thermal pulse setting, remove the Original feed table cover and locate **SW3** and **SW4** on the **Image Processing PCB**.
8) Read the value of resistance labeled on the Thermal print head and check if the setting of SW3 and SW4 are correct, referring to the correlation table on the next page.
[**Chart 1** for 3-connector Thermal print head & **Chart 2** for 2-connector one]
9) If they are not set correctly, reset **SW3** for **HP1** and **SW4** for **HP2**.

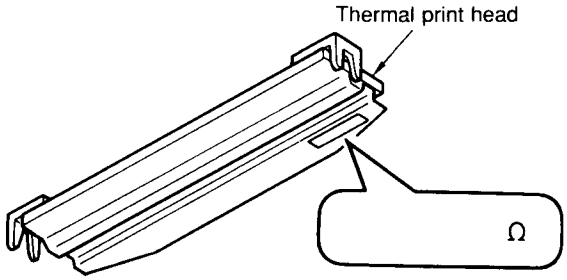
[Note]

Never forget to put back the jumper connector to **TP3** after the voltage adjustment.

- Results of Misadjustment -

1) If the heating time for **HP2** is too short (not enough heat); ➡
thin horizontal lines can not be reproduced clearly.
2) If the heating time for **HP1** is too long (too much heat); ➡
the solid print image will be deformed and the Thermal print head may be damaged.





1. Thermal Power of Thermal Print Head
Correlation Charts

[Chart 1]
- For 3-connector -

Resistance value R(Ω)	Switch setting SW3	SW4
1570 - 1573	9	A
1574 - 1609	A	B
1610 - 1630	B	C
1631 - 1662	9	A
1663 - 1694	A	C
1695 - 1715	8	A
1716 - 1750	9	B
1751 - 1760	A	C
1761 - 1768	7	9
1769 - 1803	8	B
1804 - 1828	9	C
1829 - 1856	7	A
1857 - 1874	8	B
1875 - 1900	9	D
1901 - 1909	6	A
1910 - 1945	7	B
1946 - 1974	8	C
1975 - 1998	6	A
1999 - 2033	7	B
2034 - 2050	8	D
2051 - 2086	6	B
2087 - 2121	7	C
2122 - 2130	8	D

[Chart 2]
- For 2-connector -

Resistance value R(Ω)	Switch setting SW3	SW4
1505 - 1521	8	9
1522 - 1561	9	A
1562 - 1571	A	B
1572 - 1576	7	8
1577 - 1611	8	9
1612 - 1638	9	A
1639 - 1666	7	9
1667 - 1701	8	A
1702 - 1705	9	B
1706 - 1713	6	8
1714 - 1756	7	9
1757 - 1772	8	B
1773 - 1806	6	9
1807 - 1838	7	A
1839 - 1861	5	8
1862 - 1896	6	9
1897 - 1904	7	A
1905 - 1916	4	8
1917 - 1952	5	9
1953 - 1970	6	A
1971 - 2007	4	8
2008 - 2035	5	B